

1. A method in a cellular telecommunications network of constructing a list of cells comprising at least one cell in which network resources are to be allocated to perform a requested service, said method comprising the steps of:

building a cell list comprising only cells that can provide the requested service.

determining each particular cell's capability to provide the requested service prior to allocating network resources in that cell; and

3. The method of allocating network resources of claim 2 further comprising, before the step of allocating network resources, the step of building a cell list comprising only cells that can provide the requested service.

1 4. The method of allocating network resources of  
2 claim 3 wherein the network resources are paging  
3 resources for paging a mobile station, and the step of  
4 determining each particular cell's capability to provide  
5 the requested service includes determining the capability  
6 of each particular cell in a location area (LA) to  
7 provide the requested service.

1 5. The method of allocating network resources of  
2 claim 4 further comprising paging for the mobile station  
3 only in the cells of the LA that can provide the  
4 requested service.

1 6. The method of allocating network resources of  
2 claim 5 further comprising the steps of:  
3 determining that the mobile station did not respond  
4 to the paging in the LA;  
5 building a cell list for a paging area (PA)  
6 comprising only cells that can provide the requested  
7 service; and  
8 paging for the mobile station only in the cells of  
9 the PA that can provide the requested service.

A' 1 7 The method of allocating network resources of  
2 claim 6 further comprising the steps of:

3 determining that the mobile station did not respond  
4 to the paging in the PA;

5 building a cell list for a service area (SA)  
6 comprising only cells that can provide the requested  
7 service; and

8 paging for the mobile station only in the cells of  
9 the SA that can provide the requested service.

10 8. A system for constructing a list of cells  
11 comprising at least one cell in which network resources  
12 are to be allocated to perform a requested service, said  
13 system comprising:

14 a capabilities database that stores information  
15 identifying each particular cell's capability to provide  
16 each of a plurality of services;

17 a processor that compares the requested service to  
18 the information stored in the capabilities database for  
19 each cell in order to determine each cell's capability to  
20 provide the requested service; and

21 a resource controller that builds a cell list  
22 comprising only cells that can provide the requested  
23 service.

41

1 9. A system for allocating network resources in a  
2 cellular telecommunications network to perform a  
3 requested service, said system comprising:  
4 a capabilities database that stores information  
5 identifying each particular cell's capability to provide  
6 each of a plurality of services;  
7 a processor that compares the requested service to  
8 the information stored in the capabilities database for  
9 each cell in order to determine each cell's capability to  
10 provide the requested service; and  
11 a resource controller that allocates network  
12 resources only in the cells that can provide the  
13 requested service.

1 10. The system for allocating network resources of  
2 claim 9 wherein the network resources are paging  
3 resources for paging a mobile station, and the  
4 capabilities database stores information identifying the  
5 capability of each particular cell in a location area  
6 (LA) to provide each of the plurality of services.

1 11. The system for allocating network resources of  
2 claim 10 wherein the processor compares the requested  
3 service to the information stored in the capabilities  
4 database for each cell in the LA in order to determine

5 the capability of each cell in the LA to provide the  
6 requested service.

1 12. The system for allocating network resources of  
2 claim 11 further comprising a cell list database that  
3 stores cell lists comprised only of cells that can  
4 provide the requested service.

1 13. The system for allocating network resources of  
2 claim 12 wherein the cell list database includes:

3 a cell list comprised only of cells in the LA that  
4 can provide the requested service;

5 a cell list comprised only of cells in a paging area  
6 (PA) that can provide the requested service; and

7 a cell list comprised only of cells in a service  
8 area (SA) that can provide the requested service.

1 14. The system for allocating network resources of  
2 claim 13 further comprising a paging mechanism that  
3 retrieves the cell list for the LA from the cell list  
4 database and pages for the mobile station only in the  
5 cells of the LA that can provide the requested service.

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1           15. The system for allocating network resources of  
2 claim 14 wherein the paging mechanism determines whether  
3 the mobile station responded to the paging in the LA, and  
4 if not, retrieves the cell list for the PA from the cell  
5 list database and pages for the mobile station only in  
6 the cells of the PA that can provide the requested  
7 service.

1           16. The system for allocating network resources of  
2 claim 15 wherein the paging mechanism determines whether  
3 the mobile station responded to the paging in the PA, and  
4 if not, retrieves the cell list for the SA from the cell  
5 list database and pages for the mobile station only in  
6 the cells of the SA that can provide the requested  
7 service.

1           17. The system for allocating network resources of  
2 claim 11 wherein the processor includes programming to  
3 compare the requested service to the information stored  
4 in the capabilities database for each cell in the  
5 network's service area in order to build a cell list for  
6 each LA in the service area, a cell list for each paging  
7 area (PA) in the service area, and a cell list for the  
8 entire service area, each of the cell lists comprising  
9 only cells that can provide the requested service.